

## **Human Perceptual Model Applied to Rendering of Watermarked Signals**

### ***Abstract of the Disclosure***

A digital watermarking system uses a model of a rendering device to take into  
5 account the impact of the rendering device on visual or auditory quality of the  
watermarked signal. For visual content, a reference image and watermarked image are  
passed through the model and then supplied to a visual quality metric that assesses the  
visibility of the watermark. The digital watermark embedding is adjusted iteratively with  
each pass through this process to produce a watermarked signal that has the desired visual  
10 quality.